

There is an old adage that, “when it rains, it pours.” This adage is frequently used by SUNY Fredonia students when commenting on how extreme the local weather patterns are from their hometowns. Despite the assumption that it is true, this adage had yet to be investigated. Using thirteen years of precipitation data across all twelve months of the year, my research topic was to test whether or not there is any statistical evidence of a precipitation momentum phenomenon in Fredonia, New York. My preliminary research dealt mainly with Markov Chains calculating the likelihood of precipitation on a given day in a given month. Regression analysis conducted in R went on further to determine during which months of the year precipitation was significantly distinct from others. Finally, comparisons in distribution of precipitation were calculated between Fredonia and a gamma distribution, as well as Fredonia and Albany, New York, to quantify how dissimilar the level of precipitation in Fredonia was. All research was conducted in accordance with the thesis requirements of SUNY Fredonia Honor’s mathematics program.